

Appl. No. 10/076,136
Amd. Dated March 17, 2006
Reply to official action of December 20, 2005

REMARKS/ARGUMENTS

Claims 1–21 and 32–36 are pending in the above-captioned application. Of these, claims 1–3, 5–21, and 32–36 have been rejected, and claim 4 has been objected to.

I. Provisional Double Patenting Rejection

The Examiner provisionally rejected claims 1–21 and 32–36 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1–11 of copending Application Serial No. 10/225,454. A rejection based on a nonstatutory type of double patenting can be avoided by the filing of a terminal disclaimer. Applicants filed a terminal disclaimer with their November 4, 2005, response, in which they disclaimed the term of any patent granted on this application that would extend beyond the term of any patent granted on copending Application Serial No. 10/225,454. Please refer to that communication.

II. Rejections under 35 U.S.C. § 102(b)

Claims 1–3, 5, 6, and 32–36 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Manz et al. (US 5,599,503) (hereinafter “Manz”). This rejection is respectfully traversed. “[F]or anticipation under 35 U.S.C. § 102, a single reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present.” MPEP § 706.02. “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, USPQ2d 1913, 1920 (Fed. Cir. 1989).

With regard to claim 1, at a minimum, Manz does not teach a detection channel segment that is substantially orthogonal to the plane of the planar body structure. The Examiner has indicated that channel 20, shown in Figure 3 of Manz and described in column 4, beginning at line 20, has been read on Applicants’ detection channel segment. Applicants respectfully disagree with this interpretation. Column 4, line 20, states only that “channel piece 20 leads to a channel piece 21.” Channel piece 21 is then described in column 4, lines 48–50, as forming “the actual interaction region for the measuring light R with the sample to be investigated....” However, whether channel piece 20 or channel piece 21 is read on Applicants’ detection channel segment is irrelevant because neither channel piece 20 nor channel piece 21 is “substantially orthogonal to the plane of the planar body structure” as claimed by Applicants.

Base part 6, in which channel pieces 20 and 21 reside, is described in column 5, lines 50–54, as being preferably manufactured from monocrystalline silicon using fabrication techniques known from the semiconductor industry. I.e., base part 6 is preferably a silicon chip,

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a substantially planar body structure. While channel pieces 20 and 21 are shown in Figure 3 as being substantially orthogonal one to the other, both channel pieces lie along one surface of base part 6 and so are parallel, rather than orthogonal, to the planar orientation of base part 6. For either channel piece 20 or channel piece 21 to be orthogonal to the plane of base part 6, it would have to extend up, out of the page containing Figure 3. Figure 4, which shows channel piece 21 in cross section, clearly illustrates that this is not the case. Thus, the allegedly corresponding structure of Manz, whether seen to be channel piece 20 or channel piece 21, is rotated 90 degrees from the detection channel segment claimed by Applicants and so does not meet the "substantially orthogonal" limitation of claim 1.

In claim 15, Applicants describe the detection channel segment as being disposed in a plane that is substantially orthogonal to the plane of the body structure. As demonstrated above, Manz does not teach a detection channel having this orientation.

With regard to claim 21, as previously demonstrated, Manz does not teach a detection channel "disposed substantially orthogonally to the major plane of the body structure."

With regard to claim 32, as demonstrated above, Manz does not teach providing a planar microfluidic device having a detection channel segment "that is substantially orthogonal to a major plane of the planar microfluidic device."

Thus, Manz does not teach every aspect of the claimed invention either explicitly or impliedly, nor does the reference show the identical invention claimed by Applicants in as complete detail as is contained in independent claims 1, 15, 21, and 32. Withdrawal of the rejection of these claims under U.S.C. § 102(b) as being anticipated by Manz is, therefore, respectfully requested.

Claims 2, 3, 5, and 6 depend from claim 1; claims 16–20 depend from claim 15; and claims 33–36 depend from claim 32. These dependent claims are by definition narrower than claims 1, 15, and 32 and, as such, must be allowable over Manz if the reference does not anticipate claims 1, 15, and 32. Accordingly, Applicants respectfully assert that Manz does not anticipate any of claims 2, 3, 5–21, and 33–36. Withdrawal of the rejection of these claims under U.S.C. § 102(b) as being anticipated by Manz is, therefore, respectfully requested.

III. Rejections under 35 U.S.C. § 103(a)

Claims 7–14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Manz. To warrant rejection under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the prior art. See MPEP § 2142. As demonstrated above, the Manz reference neither teaches nor suggests all of the limitations of Applicants' amended claim 1. Thus, claim 1 is nonobvious. Claims 7–14 depend directly from claim 1. Any claim depending from a

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nonobvious claim is also nonobvious. See MPEP § 2143.03 and *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, dependent claims 7-14 are nonobvious. Withdrawal of the rejection of these claims as being unpatentable over Manz is, therefore, respectfully requested.

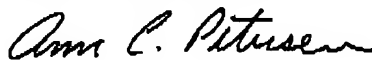
IV. Allowable subject matter

Claim 4 was objected to as being dependent upon a rejected base claim but was deemed allowable if rewritten in independent form to include limitations of the base claim and any intervening claims. Claim 4 depends directly from claim 1, which has been demonstrated above to be allowable. Therefore, claim 4 is allowable as originally presented.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe that the present application is in condition for allowance, and action toward that end is respectfully requested. If the Examiner believes that a telephone interview would expedite the examination of this application, the Examiner is requested to contact the undersigned at the telephone number below.

Respectfully submitted,



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I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on March 17, 2006, by Ann C. Petersen.

Signed: _____

